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ABSTRACT

A national sample of 127 elementary and secondary teachers of learning disabled (LD) students completed surveys on the characteristics of LD students and the instructional procedures that work with them. Responses revealed extreme variability in the teachers' beliefs about LD students and effective instructional approaches. Further, few differences were found in the beliefs of teachers with 1 to 2 years of special education teaching experience as compared to beliefs of teachers with 10 or more years of special education teaching experience. Responses further indicated a lack of confidence in the teachers' contributions to LD students. (Author/CL)

University of Minnesota

Research Report No. 66

TEACHERS' BELIEFS ABOUT LD STUDENTS

Martha L. Thurlow and James E. Ysseldyke

IRLD

Institute for Research on Learning Disabilities

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Abstract

A national sample of 127 LD teachers provided information on the characteristics of LD students and the instructional procedures that work with them. Extreme variability was found in the teachers' beliefs about LD students and approaches to instruction for them. Further, few differences were found in the beliefs of teachers with one to two years of special education teaching experience as compared to beliefs of teachers with 10 or more years of special education teaching experience. The issue of the concordance between the teachers' beliefs and reality is discussed.

Teachers' Beliefs About LD Students

The category of students labeled as "learning disabled" has created considerable controversy among educators. Definitional issues have been at the forefront of the controversy, followed closely by arguments about how best to teach LD students. Although on more than one occasion the government has provided definitions to be used, the confusion has not been dispelled. Even with the most recent definition of LD (Federal Register, 1977), researchers (Ysseldyke, Algozzine, Shinn, & McGue, 1979) have demonstrated that psychometric differences of practical utility do not exist between LD and non-LD students. Yet it is argued that "true" learning disabled students do exist. Similarly, a myriad of instructional approaches have been designed and/or used to meet the special instructional needs of LD students. One approach espoused by many as especially beneficial to LD students was that of modality training, in which instructional methods and materials are adapted to the modality (visual, auditory, or tactile) strengths of the student (cf. deHirsch, Jansky, & Langford, 1966; Lerner, 1971; Wepman, 1967). Other approaches also have been promoted as the answer to the question of how to teach learning disabled students.

Much has been written about LD children, their characteristics, and their instructional needs. These range from "sophisticated" books and educational journal articles to articles in "grocery-store" magazines. The information presented varies greatly across sources and even within them. Teachers trained to work with LD students generally are exposed to all of these sources, but supposedly, they rely on the best of them during their training and teaching.

Teachers, of course, are the major force in the education of LD students. It is important to document the nature of their beliefs about these students since their beliefs, to a large extent, direct the services that these students receive in school. In a survey of regular education teachers, Ysseldyke, Pianta, Christenson, Wang, and Algozzine (1982) found that teachers who had referred a student for psychoeducational evaluation most often believed that the causes of the student's problems were within the child or the child's home. Further, the instructional interventions these teachers used before resorting to referral involved changes in materials or the physical setting of the child. However, regular education teachers rarely are trained specifically to meet the needs of special education students.

To get a truer picture of current beliefs and instructional practices as they relate to the learning disabled student, it is appropriate to go to those who have been trained to deal with special education students. The present study did just that. A sophisticated pool of LD teachers, members of a professional group concerned with the education of LD students, was surveyed regarding their beliefs about LD students and what works best in teaching them. In addition to a descriptive summary of the responses, analyses were undertaken to compare the responses of more experienced teachers with those of less experienced teachers. These latter analyses were conducted to obtain information related to the finding of Greener and Thurlow (1982) that regular education teachers believe they are adequately prepared to deal with LD students in their classrooms, regardless of the amount of teaching experience they have had.

Method

Subjects

Subjects were 127 LD teachers from 36 states, the District of Columbia, and Canada. The distribution of subjects by states and other locations is presented in Table 1. These subjects were ones who responded to a survey sent to 400 members of the Council for Exceptional Children (CEC) Division for Children with Learning Disabilities (DCLD[1]). The 31.8% response rate seemed to be artificially low due to the fact that not all DCLD members are teachers of LD students. Although a cover letter requested recipients to forward the letter to LD teachers if they were not themselves LD teachers, it is unlikely that this always occurred.

Insert Table 1 about here

The communities in which the responding LD teachers were employed were characterized by 27 (21.2%) as rural, by 42 (33.1%) as urban, by 51 (40.2%) as suburban, and by 3 (2.4%) as a combination of two or three types; 4 (3.1%) individuals did not characterize their communities. Of the 127 subjects, 73 (57.5%) were teaching at the elementary level, 12 (9.4%) in middle schools, 25 (19.7%) at the secondary level, and 11 (8.7%) at more than one level; 6 (4.7%) individuals did not indicate the level at which they taught. The subjects included 7 (5.5%) males and 115 (90.6%) females; 5 (3.9%) individuals did not respond to this item.

Materials

A teacher survey was developed to investigate LD teachers' beliefs about learning disabled students and instructional interventions that are effective with them (see Appendix A). Six free response items asked

subjects to describe (a) major characteristics of LD students, (b) major reasons children become LD, (c) information most useful in determining level and amount of service needed by LD students, (d) what works best for teaching reading to LD students, (e) what works best for teaching mathematics to LD students, and (f) what works best for teaching written language to LD students. For each response to these items, subjects were instructed to indicate the major source of their information (experience, books and journals, training, or other). The survey also presented seven statements about LD students and asked subjects to indicate their agreement with each of them on a four-point scale from "strongly agree" to "strongly disagree." In addition, subjects were asked to indicate the extent to which 15 student characteristics were a problem in working with LD youngsters, using a four-point scale from "very significant problem" to "not a problem." Finally, the survey asked subjects to provide information about their backgrounds, the programs in which they were teaching, the children served, and their school district criterion for classification as LD.

Procedure

In January 1981, surveys and stamped return envelopes were sent to 200 members of DCLD. Two months later, an additional 200 DCLD members were mailed the survey and stamped return envelopes. No attempt was made to send follow-up surveys to individuals who did not respond.

Results

Background Information

Subjects provided information about their backgrounds and the students they were teaching. The highest degree held was listed as a bachelors degree by 38 (29.9%) respondents, a masters degree by 73 (57.5%), and a

specialist degree by 5 (3.9%); 11 (8.7%) did not answer this item. The number of years of teaching experience with regular students ranged from 0 to 22 ($\bar{X}$ = 3.6); 35 (27.6%) had never taught regular education. The number of years teaching special education students ranged from 0 to 19 ($\bar{X}$ = 6.1); only one (0.8%) subject was in the first year of teaching special education students.

The type of students currently being taught was characterized as LD by 83 (65.4%) respondents, ED by 1 (0.8%) respondent, other by 3 (2.4%), and as 2 or more types by 40 (31.5%) respondents. The approximate number of children served each day was identified as 8 or less by 8 (6.3%) subjects, 9-15 by 35 (27.6%) subjects, and as over 15 by 83 (65.4%) subjects; one person did not respond. The type of program in which the subjects were teaching was characterized as special class by 23 (18.1%) subjects, resource room by 74 (58.3%), other by 17 (13.4%), and as a combination of programs by 13 (10.2%). Included among the "other" programs were itinerant, team teaching, consultant, and diagnostic.

Characteristics of LD Students

Subjects gave from 1 to 5 responses when asked to list the major characteristics of learning disabled students. The majority (107; 84.2%) provided three characteristics (3 spaces were provided for responses). A total of 367 characteristics was listed by the 127 subjects. These were categorized into 12 areas, as shown in Table 2. Examples of the responses included within each characteristic area are given in Appendix B. No single area was mentioned by subjects with much more frequency than any other. Four areas only were included by over 10% of the subjects: processing/memory difficulties, attentional difficulties, poor academic

achievement, and some type of discrepancy.

Insert Table 2 about here

Table 3 presents a breakdown of the percentages of characteristics listed by less experienced (1-2 yrs) and more experienced ($\geq$ 10 yrs) teachers. Most percentages were very similar for the two groups; none of the differences was statistically significant.

Insert Table 3 about here

When subjects indicated the major source of their information about the characteristics of LD students they frequently noted more than one source. Overwhelmingly, the source indicated most often was experience (57.0%), followed nearly equally by training (22.8%) and books and journals (18.3%). Only 11 responses (2.0%) were "other" sources or no answer; included in the "other" category were state guidelines, meetings, parent input, etc. The percentages of the sources cited by the less experienced and more experienced teachers were similar except for training, where less experienced teachers noted this source with somewhat greater frequency (22.4%) than did more experienced teachers (15.8%).

Reasons Children Become LD

Subjects gave from 0 to 3 responses when asked to list the major reasons children become LD students. The majority (89; 70.1%) again provided three responses. A total of 326 reasons was listed by the 121 subjects responding to this item. These are categorized

into the eight areas presented in Table 4 (See Appendix B for examples of responses within each area). One reason area, Medical/hereditary, was listed with much greater frequency than others. Three other reason areas were included by more than 10% of the subjects: student inability, home/cultural environment, and a failure on the part of the school.

Insert Table 4 about here

Table 5 presents the percentages for less experienced and more experienced teachers. The more experienced teachers less often gave Home/Cultural Environment reasons and more often gave School Failure reasons than did the less experienced teachers; however, these differences (and all others) were not statistically significant.

Insert Table 5 about here

The major source of information about the reasons for LD indicated by subjects again was mainly experience (46.6%), followed almost equally by books and journals (26.0%) and training (25.5); 9 responses (1.9%) were "other" sources (testing, own hypotheses) or no answers. Similar percentages were found for each source for the less experienced and more experienced teachers.

Useful Information

Subjects gave from 0 to 5 responses when asked to indicate the information most useful in determining the level and amount of service needed by LD students; most (98; 77.2%) provided the three responses for

which there were spaces. A total of 349 types of information was listed by the 125 subjects. These were categorized into the 11 areas presented in Table 6. Examples of the responses in each information type are provided in Appendix B. The most frequently mentioned information was formal tests. This was the only type of information mentioned by greater than 10% of the subjects as being useful for determining the level and amount of services needed by LD students. It is interesting to note that while the most frequently listed reason for learning disabilities was Medical/hereditary (see Table 4), only 0.8% of the responses suggested that medical data would provide useful information for serving LD students.

Insert Table 6 about here

The responses of both the less experienced and more experienced teachers reflected the emphasis given to formal tests (see Table 7). In contrast, the less experienced teachers more often listed observational information and information derived from working with the child as useful than did the more experienced teachers; the differences in these percentages were statistically significant (observation: $z=1.96$; working with child: $z=1.96$).

Insert Table 7 about here

As in their responses to other items, subjects indicated that the major source of their information was experience (67.0%), followed by training (21.7%), then books and journals (8.3%); 14 responses

(3.0%) were "other" sources or no answers. The percentages of times experience was cited as the source by less experienced and more experienced teachers were similar. However, books and journals were cited more often by the more experienced teachers than the less experienced teachers (13.0% vs 8.0%) while the reverse was the case for training (14.0% vs 31.5%).

Teaching Reading to LD Students

Subjects gave from 1 to 4 responses when asked to specify what works best for teaching reading to LD students; most (94; 74.0%) provided three responses. A total of 341 responses were given by the 127 subjects. These responses were categorized into 11 areas (see Table 8). Appendix B provides examples of responses within each category. Specific programs or approaches were listed most frequently as "working" when teaching reading to LD students. No other categories of responses were listed by more than 10% of the subjects.

Insert Table 8 about here

Table 9 presents responses of less experienced and more experienced teachers. As is evident in the table, the percentages for each category were similar; no statistically significant differences emerged.

Insert Table 9 about here

Experience was cited most often (63.5%) as the major source of information about what works best for teaching reading to LD students. Training (23.5%) was cited next most often, followed at a much lower

level of frequency by books and journals (9.5%) and "other" (unspecified) sources or no answers (3.5%). Less experienced and more experienced teachers cited each source with similar percentages; the largest difference was evident for the training source (26.2% vs 16.8%, respectively, for less experienced and more experienced teachers).

Teaching Mathematics to LD Students

Subjects gave from 0 to 6 responses when indicating what works best for teaching mathematics to LD students. Three responses were provided by most of the 126 respondents (87; 69.0%). A total of 337 responses were given by those subjects. These responses were categorized into the 11 areas shown in Table 10. Appendix B gives examples of the responses included within each category. Two types of responses were given with equal frequency: manipulative materials and repetition/drill/practice. A task analytic/structured approach also was mentioned frequently by subjects. It is noteworthy that a specific program/approach was cited as "working" for mathematics with much less frequency than for teaching reading.

Insert Table 10 about here

Table 11 presents the responses given by less experienced and more experienced teachers. Only the difference between the percentages for Specific Program/Approach was statistically significant ($z=2.11$). The teachers with more experience listed specific programs or approaches to teaching mathematics with much greater frequency (18.4%) than did teachers with less experience (6.8%).

Insert Table 11 about here

Experience again was checked most often (63.1%) as the major source of information about what works best for teaching mathematics to LD students. Training (19.3%) was cited next most often, followed by books and journals (11.9%), and "other" (unspecified) sources or no answers (5.7%). Both less experienced and more experienced teachers cited experience as the source of their information with similar frequency. Books and journals were cited more often by less experienced teachers (14.3%) than by more experienced teachers (7.7%), as was training (22.8% vs 14.3%).

Teaching Written Language to LD Students

Subjects gave from 0 to 4 responses when indicating what works best for teaching written language to LD students. Three responses were provided by most (74; 58.3%) of the respondents. A total of 286 responses were given by the subjects. These responses were categorized into eight areas (see Table 12). Appendix B provides examples of the responses included within each category. The category of Structured/Task Analysis Skills Teaching was mentioned most often, followed by a variety of specific programs or approaches, high interest/personal/variety materials, and a modality/sensory approach. All other categories were noted by less than 10% of the respondents.

Insert Table 12 about here

The percentages of responses in each category for the less experienced and more experienced teachers are shown in Table 13. Statistically significant differences were not found between any of the

percentages.

Insert Table 13 about here

Experience was cited most often (66.8%) as the major source of information about teaching written language, followed at a much lower level (19.4%) by training. Books and journals (7.1%) and other sources or no answers (6.6%) were cited with relatively low frequencies. Less experienced and more experienced teachers cited experience as the source with equivalent percentages; training was mentioned more often by less experienced teachers (22.1%) than by more experienced teachers (16.4%), as was books and journals (10.5% vs 4.7%).

Beliefs About Learning Disabled Students

Table 14 summarizes the subjects' responses to six statements about LD students. Subjects were nearly equally divided in their agreement (SA or A) and disagreement (SD or D) with two statements, the first on LD students' ability to learn as well as normal students when given appropriate support services, and the second on the existence of behavior problems in LD students. On only one of the statements did the majority of subjects indicate disagreement; that statement proposed that information on the student's IQ was useful for teaching. On all other statements, the majority of the subjects were in agreement with the propositions made. Most subjects were in strong agreement with the statement that data collected for eligibility decisions are useful for instructional and programming decisions.

Insert Table 14 about here

Table 15 presents a breakdown of the responses made by less experienced (1-2 yrs) and more experienced (≥ 10 yrs) teachers. Ratings of SA and A have been combined in the table, as have ratings of SD and D. Most percentages for the two groups were quite similar; a statistically significant difference emerged only for the statement that LD students have behavior problems ($z=2.12$). Less experienced teachers more often agreed with this statement (74.1%) than did more experienced teachers (44.4%).

Insert Table 15 about here

Table 16 summarizes the extent to which subjects viewed 15 student characteristics as a problem when working with LD students. It is notable that every characteristic listed was seen as a significant or very significant problem by the majority of subjects. The problems most frequently given a VS or S rating were: distractibility (96.9%), weak auditory memory (95.2%), poor discrimination skills (95.2%), and inadequate self-concept (91.9%). The problems most frequently rated as not a problem or as an insignificant problem in working with LD students were: neurological dysfunctions (29.7%), confusion with directionality (21.9%), fine motor problems (20.8%), and social immaturity (18.7%).

Insert Table 16 about here

A breakdown of the views of less experienced and more experienced teachers on each of the 15 student characteristics is shown in Table

17. The responses of the two groups of teachers were similar for all characteristics; no statistically significant differences emerged.

Insert Table 17 about here

Discussion

Teachers of learning disabled students are on the front line when it comes to helping these students overcome, or at least, deal with their disabilities. They work with large numbers of LD students every day. One would think that their insights about LD students and instructional procedures that work with them would provide a clear picture of who these students are and what education for them needs to be to meet their needs. Unfortunately, a clear picture did not emerge in the current survey of the beliefs of teachers of LD students.

The 127 teachers in this sample worked with approximately 1600 students during a typical day, usually within a resource room setting. The teachers were well educated; over 60% had earned degrees beyond the bachelor degree level. Approximately 60% had taught special education for at least five years. Yet, despite the sophisticated level of these teachers, the most consistent finding regarding their beliefs about LD students and approaches to instruction for them was the extreme variability.

Who is the LD Student?

According to their teachers, LD students can be characterized by their processing and memory difficulties, their attentional difficulties and distractibility, their poor academic achievement, and a variety of other characteristics. The characteristic most agreed upon was that of

processing and memory difficulties, yet this characteristic was reported in only 15.5% of the responses. Further, in a list of 15 characteristics, all were seen as a problem in working with LD students. Clearly, these responses confirm the heterogeneous nature of the population of students now labeled as learning disabled.

Although LD students were seen as having numerous and varied disabilities, the reasons for the disabilities were described with greater agreement by their teachers. Not surprisingly (cf. Christenson & Ysseldyke, 1981), most of the reasons given attributed the source of the disability to within-child causes. Specifically, over 35% of the responses reflected medical or hereditary causes and over 23% reflected student inability causes. Yet, 18% of the responses did attribute the disabilities to some kind of failure on the part of the school, usually to inadequate regular education teachers or curricula.

Given the varied characteristics of LD students, it is reasonable to expect that information is needed on each student to determine the nature of services that should be provided to meet the specific needs of the student. Yet, an overwhelming 41% of the responses indicated that formal tests would provide the information that would be useful for providing services to LD students.

How Should the LD Student Be Taught?

From the responses of their teachers, one might conclude either that almost anything works in teaching LD students or that nothing works. Regardless of subject area, the use of a specific program or approach was high on the list of "what works." This category represented numerous commercially published programs, books, etc. One suspects that teachers

rely heavily upon the materials available to them in their schools. The variety of materials within this category, and the large number of other categories listed by teachers, further suggest that teachers are using almost anything they can find, and that there is little agreement on what works in teaching LD students. Nearly all responses reflected techniques considered important in regular education classes. The one exception, perhaps, were responses focusing on the need for a modality approach, either the use of a multimodality approach or an approach emphasizing teaching to the student's strong modality. This approach was emphasized most for teaching written language (16.1%) and least for teaching mathematics (2.4%).

Are Teachers' Beliefs Influenced by their Experiences?

Teachers, regardless of their actual number of years of teaching experience attributed their knowledge regarding the characteristics of LD students and what works in teaching them to their experience. This finding is consistent with the conclusions of sociological studies of the teaching profession (cf. Lortie, 1975), where teachers have attributed their teaching abilities to trial and error learning in the classroom. One might expect that if experience does in fact underlie teachers' knowledge and teaching abilities, the beliefs of more experienced and less experienced teachers would differ. In general, however, this was not the case. Very few differences emerged in the beliefs of teachers with 1 to 2 years of experience as compared to those of teachers with 10 years or more of experience. No differences were found in the beliefs of the two groups of teachers regarding the major characteristics of LD students, the reasons for learning disabilities, and what works

best for teaching reading and written language. In listing information useful for providing services to LD students, less experienced teachers significantly more often saw observations and working with the child as giving information useful for providing services to LD students than did more experienced teachers. Specific programs/approaches were listed as working for math significantly more often by more experienced teachers than by less experienced teachers.

Conclusion

The crucial issue becomes the extent to which teachers' beliefs are in accord with reality, or at least with evidence provided by research. Unfortunately, few attempts have been made to document the validity of teachers' beliefs or techniques. One notable exception was the study of the modality model by Arter and Jenkins (1977), in which they found little evidence to support the use of modality instructional matching in beginning reading. A survey of teacher training textbooks, as well as reports prepared by authorities in the field of learning disabilities (cf. Clements, 1966) reveals that nearly all the responses given by teachers in the present survey appear in print, often documented by research. The next issue, then, becomes the quality of the research findings. In an initial attempt to investigate this issue and its relevance to the current findings, editors of educational and psychological journals are being asked to review some of the teachers' responses in the current survey in terms of the extent to which they are supported by quality research.

Perhaps the most disturbing finding of the current survey was the re-

sponse of the teachers to the statement, "Given appropriate support services, learning disabled students learn as well as normal students." Despite the sophisticated level of the teachers, and their willingness to list materials or techniques that "work" when teaching LD students, as many disagreed with the statement (42.1%) as agreed with it (43.8%). Considering that these teachers serve approximately 1600 students on a typical day, this lack of confidence in their contribution to learning disabled students indeed is disturbing and emphasizes the need to clarify the current status of methods for identifying and serving LD students, and to develop alternatives where current methods are found to be inadequate.

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Footnote

Special appreciation is extended to Lisa Boyum and Kaye Storey for their assistance in coding and tabulating the data.

Table 1

Distribution of Subjects by Location[a]

Location	Number	Location	Number
Alabama	3	Montana	1
Alaska	3	Nebraska	2
Arizona	2	Nevada	1
Arkansas	0	New Hampshire	0
California	9	New Jersey	1
Colorado	3	New Mexico	3
Connecticut	3	New York	3
Delaware	1	N. Carolina	1
District of Columbia	2	N. Dakota	0
Florida	4	Ohio	6
Georgia	4	Oklahoma	3
Hawaii	0	Oregon	1
Idaho	0	Pennsylvania	5
Illinois	13	Rhode Island	0
Indiana	4	S. Carolina	0
Iowa	3	S. Dakota	1
Kansas	8	Tennessee	1
Kentucky	2	Texas	4
Louisiana	1	Utah	0
Maine	0	Vermont	0
Maryland	1	Virginia	4
Massachusetts	4	Washington	1
Michigan	4	West Virginia	0
Minnesota	1	Wisconsin	4
Mississippi	0	Wyoming	0
Missouri	0	Canada	5

[a]N=122. Five subjects did not specify their location.

Table 2

Major Characteristics of LD Students

Characteristic Area	N	Percent[a]
Processing/Memory Difficulties	57	15.5
Attentional Difficulties/Distractibility	50	13.6
Poor Academic Achievement	45	12.3
Discrepancy (IQ-Ach; Verb-Perf)	42	11.4
Perceptual/Motor Difficulties	33	9.0
Organizational Difficulties	27	7.4
Motivational Difficulties	25	6.8
Social/Behavioral Difficulties	20	5.4
Need for Special Programs	18	4.9
Average or Above IQ	17	4.6
Other[b]	17	4.6
Inconsistent Performance	16	4.4

[a] Percentages are based on the total number of 367 characteristics listed by the 127 subjects.

[b] Included in "other" were a variety of responses that were difficult to fit within the established categories (e.g., uniqueness, put out a lot of effort, street-smart, etc.).

Table 3

Major Characteristics of LD Students Listed by Less Experienced and More Experienced Teachers

Characteristic Area	Less Experienced[a]	More Experienced[b]
Processing/Memory Difficulties	10.5	13.6
Attentional Difficulties/Distractibility	19.7	14.8
Poor Academic Achievement	10.5	11.1
Discrepancy (IQ-Ach; Verb-Perf)	7.9	7.4
Perceptual/Motor Difficulties	13.2	21.0
Organizational Difficulties	6.6	7.4
Motivational Difficulties	10.5	3.7
Social/Behavioral Difficulties	6.6	6.2
Need for Special Programs	1.3	2.5
Average or Above IQ	2.6	3.7
Other	5.3	2.5
Inconsistent Performance	5.3	6.2

[a] Numbers are percentages of the total number of 76 characteristics listed by the 27 teachers with 1-2 years of special education teaching experience.

[b] Numbers are percentages of the total number of 81 characteristics listed by the 27 teachers with 10 years or more of special education teaching experience.

Table 4

Major Reasons Children Become LD Students

Reason Area	N	Percent[a]
Medical/Hereditary	110	33.7
Student Inability	65	19.9
Home/Cultural Environment	51	15.6
School Failure	45	13.8
Developmental Lag	24	7.4
Unknown	17	5.2
Function of Diagnosis	10	3.1
Other[b]	4	1.2

[a]Percentages are based on the total number of 326 reasons listed by 121 subjects.

[b]Included in "other" were not due to environmental deprivation, personality traits, etc.

Table 5

Major Reasons Students Become LD Students Listed by Less Experienced and More Experienced Teachers

Reason Area	Less Experienced[a]	More Experienced[b]
Medical/Hereditary	40.0	36.1
Student Inability	18.5	23.6
Home/Cultural Environment	15.4	8.3
School Failure	13.8	18.0
Developmental Lag	3.1	4.2
Unknown	4.6	5.6
Function of Diagnosis	4.6	4.2
Other	0.0	0.0

[a]Numbers are percentages of the total number of 65 reasons listed by the 27 teachers with 1-2 years of special education teaching experience.

[b]Numbers are percentages of the total number of 72 reasons listed by the 27 teachers with 10 years of more of special education teaching experience.

Table 6

Useful Information in Providing Services to LD Students

Type of Information	N	Percent[a]
Formal Tests	143	41.0
Teacher Input	36	10.3
Observation	34	9.7
School Records	30	8.6
Informal Tests	26	7.4
Other[b]	22	6.3
Working with Child	20	5.7
Learning Style, Interests	12	3.4
Other Input	12	3.4
Parent Input	11	3.2
Medical Data	3	0.8

[a]Percentages are based on the total number of 349 types of information listed by 125 subjects.

[b]Included in the "other" category were a variety of responses that were difficult to fit within the established categories (e.g., school curriculum demands, social history, available services, academic progress, etc.).

Table 7

Useful Information in Providing Services to LD Students Listed by Less Experienced and More Experienced Teachers

Type of Information	Less Experienced[a]	More Experienced[b]
Formal Tests	37.7	43.4
Teacher Input	10.4	11.8
Observation[c]	10.4	2.6
School Records	7.8	7.9
Informal Tests	10.4	5.3
Other	7.8	10.5
Working with Child[c]	10.4	2.6
Learning Style, Interests	1.3	6.6
Other Input	1.3	2.6
Parent Input	2.6	3.9
Medical Data	0.0	2.6

[a]Numbers are percentages of the total number of 77 types of information listed by the 27 teachers with 1-2 years of special education teaching experience.

[b]Numbers are percentages of the total number of 76 types of information listed by the 26 teachers with 10 years or more of special education teaching experience.

[c]Difference between two percentages is statistically significant at the .05 level.

Table 8

Teaching Reading to LD Students

What Works	N	Percent[a]
Specific Program/Approach	94	27.6
Structured/Task Analysis Skills Teaching	33	9.7
Repetition/Drill/Practice	32	9.4
High Interest Materials	31	9.1
Specific Type of Materials	30	8.8
Individualized/Small Group Instruction	28	8.2
Multisensory/Multimodality Approach	27	7.9
Motivation/Reinforcement	26	7.6
Other[b]	18	5.3
Teach to Strong Modality	14	4.1
Variety of Materials	8	2.3

[a]Percentages are based on the total number of 341 responses given by 127 subjects.

[b]Included in the "other" category were a variety of responses that were difficult to fit within the established categories (e.g., practical application, teacher-directed lessons, knowledge of many approaches, I wish I could find such an animal).

Table 9

Less Experienced and More Experienced Teachers' Views of What Works in Teaching Reading to LD Students

What Works	Less Experienced[a]	More Experienced[b]
Specific Program/Approach	27.8	25.3
Structured/Task Analysis Skills Teaching	6.9	13.3
Repetition/Drill/Practice	12.5	14.7
High Interest Materials	15.3	8.0
Specific Type of Materials	6.9	8.0
Individualized/Small Group Instruction	6.9	6.7
Multisensory/Multimodality Approach	8.3	5.3
Motivation/Reinforcement	4.2	5.3
Other	4.2	6.7
Teach to Strong Modality	4.2	4.0
Variety of Materials	2.8	2.7

[a]Numbers are percentages of the total number of 72 responses of the 27 teachers with 1-2 years of special education teaching experience.

[b]Numbers are percentages of the total number of 75 responses of the 27 teachers with 10 years of more of special education teaching experience.

Table 10

Teaching Mathematics to LD Students

What Works	N	Percent[a]
Manipulative Materials	55	16.3
Repetition/Drill/Practice	55	16.3
Structured/Task Analysis Skills Teaching	44	13.0
Other[b]	34	10.1
Specific Type of Materials	32	9.5
Specific Program/Approach	31	9.2
Practical Applications	30	8.9
Motivation/Reinforcement	20	5.9
Individualized/Small Group Instruction	19	5.6
High Interest/Variety Materials	9	2.7
Modality/Sensory Approach	8	2.4

[a]Percentages are based on the total number of 337 responses given by 126 subjects.

[b]Included in the "other" category were a variety of responses that were difficult to fit within the established categories (e.g., give student enough time, estimate reasonable answers first, support from home, I wish I knew).

Table 11

Less Experienced and More Experienced Teachers' Views of What Works in Teaching Mathematics to LD Students

What Works	Less Experienced[a]	More Experienced[b]
Manipulative Materials	16.4	15.8
Repetition/Drill/Practice	21.9	17.1
Structured/Task Analysis Skills Teaching	12.3	15.8
Other	6.8	6.6
Specific Type of Materials	5.5	3.9
Specific Program/Approach[c]	6.8	18.4
Practical Applications	9.6	3.9
Motivation/Reinforcement	6.8	5.3
Individualized/Small Group Instruction	5.5	6.6
High Interest/Variety Materials	4.1	3.9
Modality/Sensory Approach	4.1	2.6

[a] Numbers are percentages of the total number of 73 responses of the 27 teachers with 1-2 years of special education teaching experience.

[b] Numbers are percentages of the total number of 76 responses of the 27 teachers with 10 years or more of special education teaching experience.

[c] Difference between two percentages is statistically significant at the .05 level.

Table 12

Teaching Written Language to LD Students

What Works	N	Percent[a]
Structured/Task Analysis Skills Teaching	63	22.0
Specific Program/Approach	53	18.5
High Interest/Personal/Variety Materials	53	18.5
Modality/Sensory Approach	45	16.1
Motivation/Reinforcement	26	9.1
Practice/Correcting Errors	24	8.4
Other[b]	14	4.9
Individualized/Small Group Instruction	7	2.4

[a]Percentages are based on the total number of 286 responses given by 123 subjects.

[b]Included in the "other" category were a variety of responses that were difficult to fit within the established categories (e.g., field trips, organizational, knowledge of approaches, I wish I knew).

Table 13

Less Experienced and More Experienced Teachers' Views of What Works in Teaching Written Language to LD Students

What Works	Less Experienced[a]	More Experienced[b]
Structured/Task Analysis Skills Teaching	13.8	18.9
Specific Program/Approach	38.5	36.5
High Interest/Personal/Variety Materials	13.8	10.8
Modality/Sensory Approach	3.1	8.1
Motivation/Reinforcement	6.2	5.4
Practice/Correcting Errors	18.5	10.8
Other	4.6	5.4
Individualized/Small Group Instruction	1.5	4.0

[a] Numbers are percentages of the total number of 65 responses of the 26 teachers with 1-2 years of special education teaching experience.

[b] Numbers are percentages of the total number of 74 responses of the 27 teachers with 10 years or more of special education teaching experience.

Table 14

Percentages of Subjects Indicating Agreement or Disagreement with Six Statements about Learning Disabled Students

Statement[a]	Strongly Agree	Agree	Disagree	Strongly Disagree
LD students learn normally with support services	11.6	43.8	42.1	2.5
Eligibility data useful for instruction	56.3	38.9	4.8	0.0
LD students have perceptual problems	25.6	56.8	17.6	0.0
LD students have language problems	30.3	58.2	9.8	0.8
LD students have behavior problems	10.5	39.5	44.4	5.6
LD students have modality strengths and weaknesses	23.0	56.3	18.2	2.4
IQ data useful for instruction	7.9	29.4	46.0	16.7

[a]See Appendix A for complete statements.

Table 15

Percentages of Less Experienced and More Experienced Teachers Indicating Agreement or Disagreement with Seven Statements About Learning Disabled Students[a]

Statement[b]	Agree[c]		Disagree[d]	
	1-2 yrs	≥10 yrs	1-2 yrs	≥10 yrs
LD students learn normally with support services	65.4	48.1	34.6	51.8
Eligibility data useful for instruction	96.3	92.6	3.7	7.4
LD students have perceptual problems	88.9	85.2	11.1	14.8
LD students have language problems	92.3	88.9	7.7	11.1
LD students[e] have behavior problems	74.1	44.4	25.9	55.6
LD students have modality strengths and weaknesses	92.6	74.1	7.4	25.9
IQ data useful for instruction	37.0	34.6	63.0	65.4

[a]Responses were divided into those from teachers with 1-2 years of special education teaching experience (less experienced) and those with 10 years or more of special education teaching experience (more experience).

[b]See Appendix A for complete statements.

[c]Ratings of Strongly Agree and Agree were combined.

[d]Ratings of Strongly Disagree and Disagree were combined.

[e]Differences between two percentages is statistically significant at the .05 level.

Table 16

Percentages of Subjects Rating Extent to Which 15 Student Characteristics are a Problem in Working with LD Students[a]

Characteristic	VS	S	I	N
Weak auditory memory	43.2	52.0	4.8	0.0
Confusion with directionality	15.4	62.6	21.1	0.8
Fine motor problems	13.6	65.6	20.8	0.0
Poor discrimination skills	31.0	62.7	6.3	0.0
Hyperactivity	23.8	62.7	11.9	1.6
Distractibility	45.7	51.2	2.4	0.8
Lack of motivation	44.4	43.6	9.5	2.4
Neurological dysfunction	14.0	56.2	26.4	3.3
Insecurity	20.2	67.2	10.1	2.5
Anxiety with regard to school	29.8	57.2	10.5	2.4
Inadequate self concept	49.2	42.7	5.6	2.4
Poor interpersonal relationships	25.4	64.0	8.8	1.8
Social immaturity	14.6	66.7	17.9	0.8
Poor judgment	20.3	64.2	13.8	1.6
Inability to learn when given conventional instructions	52.0	34.1	12.2	1.6

[a]Subjects ratings were on a scale of four levels: VS = very significant problem, S = significant problem, I = insignificant problem, and N = not a problem.

Table 17

Percentages of Less Experienced and More Experienced Teachers' Rating Extent to Which 15 Student Characteristics are a Problem in Working with LD Students[a]

Characteristic	Significant[b]		Insignificant[c]	
	1-2 yrs	≥10 yrs	1-2 yrs	≥10 yrs
Weak auditory memory	100.0	96.3	0.0	3.7
Confusion with directionality	77.8	80.8	22.2	19.2
Fine motor problems	77.8	88.5	22.2	11.5
Poor discrimination skills	92.6	96.3	7.4	3.7
Hyperactivity	84.6	96.3	15.4	3.7
Distractibility	92.6	100.0	7.4	0.0
Lack of Motivation	81.5	88.9	18.5	11.1
Neurological dysfunction	65.4	80.8	34.6	19.2
Insecurity	84.6	80.8	15.4	19.2
Anxiety with regard to school	88.5	84.6	11.5	15.4
Inadequate self-concept	92.3	92.3	7.7	7.7
Poor interpersonal relationships	76.0	88.5	24.0	11.5
Social immaturity	72.0	84.6	28.0	15.4
Poor judgment	80.0	88.5	20.0	11.5
Inability to learn when given conventional instructions	84.6	84.6	15.4	15.4

[a] Responses were divided into those from teachers with 1-2 years of special education teaching experience (less experienced) and those with 10 years or more of special education teaching experience (more experienced).

[b] Ratings of Very Significant and Significant were combined.

[c] Ratings of Insignificant and Not a Problem were combined.

APPENDIX A

State in which you teach_____

Circle one: Rural Urban Suburban

Circle one: Elementary Middle Secondary

Circle one: Male Female

TEACHER SURVEY

A. For the following items, please write in your responses, then indicate whether the major source of your information was your own experience (Exp), books and journals (B&J), training (Trn), or some other source (Oth). If "other," please specify the source.

	SOURCE			
1. What are the major characteristics of learning disabled students?	Exp	B&J	Trn	Oth
a.				
b.				
c.				
2. What are the major reasons children become learning disabled students?	Exp	B&J	Trn	Oth
a.				
b.				
c.				
3. What information is most useful in determining the level and amount of service needed by learning disabled students?	Exp	B&J	Trn	Oth
a.				
b.				
c.				
4. What works best for teaching reading to students who are learning disabled?	Exp	B&J	Trn	Oth
a.				
b.				
c.				
5. What works best for teaching mathematics to students who are learning disabled?	Exp	B&J	Trn	Oth
a.				
b.				
c.				
6. What works best for teaching written language to students who are learning disabled?	Exp	B&J	Trn	Oth
a.				
b.				
c.				

B. For each of the following statements, indicate whether you Strongly Agree (SA), Agree (A), Disagree (D), or Strongly Disagree (SD). Circle <u>one</u> response on each line.

Given appropriate support services, learning disabled students learn as well as normal students.	SA	A	D	SD
Assessment data collected to determine a student's eligibility for special education services also can provide useful information for developing instructional techniques and programs.	SA	A	D	SD
In most cases, learning disabled students have perceptual problems.	SA	A	D	SD
In most cases, learning disabled students have language problems.	SA	A	D	SD
In most cases, learning disabled students have behavior problems.	SA	A	D	SD
In most cases, learning disabled students have a weakness in one modality and a strength in another.	SA	A	D	SD
It is useful to know the student's IQ to decide upon teaching techniques.	SA	A	D	SD

C. For each of the following statements, indicate the extent to which it is a problem in working with learning disabled youngsters by circling either VS (very significant problem), S (significant problem), (I) (insignificant problem), or N (not a problem).

Student has:

Weak auditory memory	VS	S	I	N	Insecurity	VS	S	I	N
Confusion with directionality	VS	S	I	N	Anxiety with regard to school	VS	S	I	N
Fine motor problems	VS	S	I	N	Inadequate self concept	VS	S	I	N
Poor discrimination skills	VS	S	I	N	Poor interpersonal relationships	VS	S	I	N
Hyperactivity	VS	S	I	N	Social immaturity	VS	S	I	N
Distractibility	VS	S	I	N	Poor judgment	VS	S	I	N
Lack of motivation	VS	S	I	N	Inability to learn when given conventional instruction	VS	S	I	N
Neurological dysfunctions	VS	S	I	N					

D. How many years have you taught regular students?_____ special education students?_____.

Please provide the following background information:

List the certificates that you hold.

Identify the highest degree you hold.

Which of the following categories best describes the children you are presently teaching?

1. Normal
2. Learning Disabled
3. Mentally retarded
4. Emotionally disturbed
5. Other (please specify)

Approximately how many children do you serve each day?

1. 8 or less
2. 9 - 15
3. over 15

In what type of program do you teach?

1. Special class
2. Resource room
3. Other (please specify).

What is the criterion for a student to be classified as learning disabled in your school district? Do you agree with it?

APPENDIX B

Examples of Responses Within Categories of Major Characteristics of LD Students

Processing/Memory Difficulties

Information processing difficulties
Severe processing weakness
Visual memory deficits
Auditory memory deficits
Trouble processing information

Attentional Difficulties/Distractibility

Distractible
Hyper or hypoactive and disinhibited
Short attention span
Difficulty of concentration and focus
Easily distracted

Poor Academic Achievement

At lower end of academic achievement
Poor academic performance
Significant deficit in one or more academic areas
Underachiever
Low achievement scores

Discrepancy (IQ-Ach; Verb-Perf)

Discrepancy between ability and achievement
Discrepancy between verbal and performance on IQ test
Normal IQ, but not performing up to capacity
Achievement below expectations with no apparent reason

Perceptual/Motor Difficulties

Perceptual problems
Visual and/or auditory perceptual problems
Eye-hand problems
Weakness in 1 or more perceptual areas
Confused directionality and perception

Organizational Difficulties

Disorganized
Lack of organizational skills
Lack of internal organization
Poor organization
Unorganized

Motivational Difficulties

Unmotivated
Not easily motivated
Attitude: not trying
Lack of motivation
Lack of confidence

Social/Behavioral Difficulties

Poor social awareness
Inappropriate peer interaction
Behavior problems
Secondary emotional/behavioral problems

Need for Special Programs

Can't learn with traditional methods
Require specialized or inventive techniques
Unable to produce in classroom setting
Inability to learn by conventional means
Need for specific teaching strategies to remediate deficits

Average or Above IQ

Normal intelligence
Average or above intelligence
Normal IQ

Inconsistent Performance

Scattered pattern of ability-know something one day and not next
Skip learners - know some things, can't learn others
Uneven development
Unpredictable - inconsistent performance

Examples of Responses Within Categories of Reasons Children Become LD Students

Medical/Hereditary

Hereditary/genetic
Brain damage/dysfunction
Physiological
Early childhood illness/accident
Allergies, epilepsy, trauma

Home/Cultural Environment

Home environment lacks stimulation, support
Cultural deficits
Economically and socially deprived
Too much TV
Instability of residence

Developmental Lag

Developmental lag
Maturational lag
Slow maturation
Immaturity
Delayed development

Function of Diagnosis

Inappropriate, incomplete diagnostic data
Diagnosis as such by psychologists
Deficits not identified at early stage
Evaluations determine they are LD

Student Inability

Unable to learn by normal methods
Unable to meet school expectations
Actual deficits in the child
Do not learn
Lack of grasping basics

School Failure

Poor preparation of regular ed. teachers
Poor, inadequate instruction
Inconsistent instruction
High pressure school curriculum
Instruction is not developmental

Unknown

Unknown etiology
Real reasons are unknown
None known for sure
Causes unknown

Examples of Responses Within Categories of Useful Information in Providing Services to LD Students

Formal Tests

Formal individual testing by psychologist
Formal assessment
Norm-referenced testing
IQ score and test data
Processing tests

Observation

Observation
Diagnostic observation
Personal observation
Watching the child working
Observation at various places

Informal Tests

Informal testing
Informal assessment
Informal diagnosis
Informal inventories
Teacher's evaluative measurements

Learning Style/Interests

Attitude and motivation of student
Ability to communicate
Learning styles/requirements
Document child's approach to learning

Parent Input

Parent input
Conferences with parents
Parent perceptions

Teacher Input

Information supplied by teacher
Talk to present teachers of student
Teacher perceptions
Comments from previous teachers
Classroom teachers' perception of child

School Records

Records
Past and present school performance
History of child's education
Background check - cumulative records
School performance records

Working with Child

Actually working with student
Personal contact
First few sessions with child
Teacher interviewing child
Questioning/interviewing child

Other Input

Input from counselors
Confidential reports from other sources
Information shared by EA and R committee
Reports from any agencies servicing student

Medical Data

Medical reports
Medical testing
Professional evaluation of vision, medical, etc.

Examples of Responses Within Categories of What Works in Teaching Reading to LD Students

Specific Program/Approach

Distar
SRA reading series
Lippincott Beginnings program
Sight-word approach (Dolch)
Direct instruction series (Distar, Corrective Reading)

Repetition/Drill/Practice

Repetition and practice
Much drill
Enough practice for overlearning
Constant relearning
Read and read and read

Specific Type of Materials

Uncluttered reading materials
Language master
Vocabulary development materials
Tape recorder
Flash cards

Multisensory/Multimodality Approach

Multisensory approach
Multimodality approach
Combined multisensory approach
Teaching through more than one modality
Tactile along with other senses

Teach to Strong Modality

Teaching to primary learning modality
Make use of student's best functioning modality
Cassettes for auditory learner
Determine strong modality for learning

Structured/Task Analysis Skills Training

Highly structured approach
Firm structure, organization
Tightly sequenced approach
Comprehensive task analysis
Break down skills

High Interest Materials

High interest materials
High interest books
Pleasure reading
Personal stories
Work in interest level

Individualized/Small Group Instruction

Small group instruction
Individual or very small group instruction
One-to-one small group setting
1:1 help
No groups

Motivation/Reinforcement

Reinforcement with rewards
Rewards and incentives
Motivational incentives
Praise the positive
Friendly encouragement

Variety of Materials

Variety of materials -
Not only one type of material
Variety of things - tapes, skills book

Examples of Responses Within Categories of What Works in Teaching Mathematics to LD Students

Manipulative Materials

Manipulatives
Pennies and dimes and other manipulatives
Handling of objects, shapes
Concrete materials
"Hands-on" materials

Structured/Task Analysis Skills Training

Task analysis approach
Work from student's errors
Provide step by step procedures
Tightly sequenced program
Sheet of steps to follow

Specific Program/Approach

Oregon Math
Basic Math series
Distar math
Specialized time and money kits
Finger math

Individualized/Small Group Instruction

Individual attention
One-to-one instruction
Individual or small groups
Small groups
Individualized curriculums

High Interest/Variety Materials

Interesting materials
High interest level
Variety of materials

Repetition/Drill/Practice

Repetition/practice/drill
Constantly review basics
Constant, consistent review
Drill in every form
Lots of practice before moving on

Specific Type of Material

Flash cards
Calculators
Visual aids
Chalkboard work
Games

Practical Applications

Practical life-related problems
Consumer oriented
Application of skills to meaningful circumstances
Consumer math approach
Functional, life-oriented tasks

Motivation/Reinforcement

Highly motivated student
Consistent support
Reinforcement whenever possible
Motivational incentives
Rewards and incentives

Modality/Sensory Approach

Multi-sensory approach
Determine modality through which learn best

Examples of Responses Within Categories of What Works in Teaching Written Language to LD Students

Structured/Task Analysis Skills Teaching

Sequential development of writing skills
Task analysis of skill
Systematic; sequential
Begin with simple.
One skill at a time

High Interest/Personal/Variety Materials

High interest material
Practical applications of own thoughts
Paragraphs on subject of own choice
Lot of "fun" writing
Vary assignments

Motivation/Reinforcement

Reinforcement with rewards
Encouragement and reinforcement often
Consistent support
Motivated teacher

Individualized/Small Group Instruction

Individual attention
Assign story to be written by groups of 2-4 students
Small group setting

Specific Program/Approach

Fernald approach
Frank Shoffer materials
McGraw Hill language series
Language experience approach
Cloze procedure

Modality/Sensory Approach

Multisensory multimodality approach
Ensure listening and reading skills are well established
Use strongest modality
Multimodality - tape recorders, typewriters
Tactice/tracing

Practice/Correcting Errors

Analysis of errors
Rewrite their materials
Daily practice
Repetition
Drill-repetition

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